at1110paper_practice_test (v27)

1. Expand the following expression into standard form.

$$(2x - 9)(8x - 7)$$

$$16x^2 - 14x - 72x + 63$$

$$16x^2 - 86x + 63$$

2. Solve the equation.

$$(7x - 2)(5x + 8) = 0$$

$$x = \frac{2}{7} \qquad x = \frac{-8}{5}$$

3. Expand the following expression into standard form.

$$(5x + 8)(5x - 8)$$

$$25x^2 - 40x + 40x - 64$$

$$25x^2 - 64$$

4. Expand the following expression into standard form.

$$(5x - 2)^2$$

$$25x^2 - 10x - 10x + 4$$

$$25x^2 - 20x + 4$$

5. Factor the expression.
$$x^2 + 16x + 63$$

$$(x + 7)(x + 9)$$

6. Factor the expression.
$$36x^2 - 49$$

$$(6x + 7)(6x - 7)$$

7. Solve the equation with factoring by grouping.
$$18x^2 - 12x - 15x + 10 \ = \ 0$$

$$(6x - 5)(3x - 2) = 0$$
$$x = \frac{5}{6} \qquad x = \frac{2}{3}$$

8. Solve the equation.
$$9x^2 - 11x - 42 \ = \ 4x^2 + 5x + 3$$

$$5x^2 - 16x - 45 = 0$$
$$(5x + 9)(x - 5) = 0$$
$$x = \frac{-9}{5} \qquad x = 5$$